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APPLICATION NO.	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.	CONFIRMATION NO.
10/733,478	12/10/2003	Yoshihiro Kobayashi	1232-5228	7673
27123	7590	05/17/2006	EXAMINER	
MORGAN & FINNEGAN, L.L.P. 3 WORLD FINANCIAL CENTER NEW YORK, NY 10281-2101			LAM, HUNG H	
			ART UNIT	PAPER NUMBER
			2622	

DATE MAILED: 05/17/2006

Please find below and/or attached an Office communication concerning this application or proceeding.

Office Action Summary	Application No. 10/733,478	Applicant(s) KOBAYASHI ET AL.	
	Examiner Hung H. Lam	Art Unit 2622	

-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --

Period for Reply

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If the period for reply specified above is less than thirty (30) days, a reply within the statutory minimum of thirty (30) days will be considered timely.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133). Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

Status

- 1) ☒ Responsive to communication(s) filed on 03/01/06.
- 2a) ☐ This action is **FINAL**. 2b) ☒ This action is non-final.
- 3) ☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

Disposition of Claims

- 4) ☒ Claim(s) 1-10 and 12-14 is/are pending in the application.
- 4a) Of the above claim(s) _____ is/are withdrawn from consideration.
- 5) ☐ Claim(s) _____ is/are allowed.
- 6) ☒ Claim(s) 1-10 and 12-14 is/are rejected.
- 7) ☐ Claim(s) _____ is/are objected to.
- 8) ☐ Claim(s) _____ are subject to restriction and/or election requirement.

Application Papers

- 9) ☐ The specification is objected to by the Examiner.
- 10) ☒ The drawing(s) filed on 18 February 2005 is/are: a) ☒ accepted or b) ☐ objected to by the Examiner.
Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).
Replacement drawing sheet(s) including the correction is required if the drawing(s) is objected to. See 37 CFR 1.121(d).
- 11) ☐ The oath or declaration is objected to by the Examiner. Note the attached Office Action or form PTO-152.

Priority under 35 U.S.C. § 119

- 12) ☒ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).
- a) ☒ All b) ☐ Some * c) ☐ None of:
1. ☒ Certified copies of the priority documents have been received.
 2. ☐ Certified copies of the priority documents have been received in Application No. _____.
 3. ☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).

* See the attached detailed Office action for a list of the certified copies not received.

Attachment(s)

- | | |
|--|---|
| 1) <input checked="" type="checkbox"/> Notice of References Cited (PTO-892) | 4) <input type="checkbox"/> Interview Summary (PTO-413)
Paper No(s)/Mail Date. _____ |
| 2) <input type="checkbox"/> Notice of Draftsperson's Patent Drawing Review (PTO-948) | 5) <input type="checkbox"/> Notice of Informal Patent Application (PTO-152) |
| 3) <input type="checkbox"/> Information Disclosure Statement(s) (PTO-1449 or PTO/SB/08)
Paper No(s)/Mail Date _____ | 6) <input type="checkbox"/> Other: _____ |

DETAILED ACTION

Response to Amendment

1. The amendments, filed on 03/01/06, have been entered and made of record. Claims 1-10 and 12-14 are pending.

Response to Arguments

2. Applicant's arguments, see remarks, page 8, filed 03/01/06, with respect to the rejection(s) of claim(s) 1-10 and 12-14 under Park and Takizawa have been fully considered and are persuasive. Therefore, the rejection has been withdrawn. However, upon further consideration, a new ground(s) of rejection is made in view of Omata.

The Applicants argue that Park (US-5,477,271) fails to teach or suggest “ a weighting device which weights a signal component corresponding to inside of a focus detection area sensed by said image sensing device...wherein said weighting device changes a level of weighting in a second area which is inside of the focus detection area and outside of a first area which is placed substantially at a center of inside of the focus detection area”. The Examiner respectfully disagrees. Park teaches a weighting device (44, Fig. 4) which weights a signal component corresponding to inside of a focus detection area in a frame (detection areas 62 and 64, Fig. 5A) sensed by said image sensing device (col. 5, Ln. 56 – col. 6, Ln. 40). Park further teaches a plurality of changes in the weighting level of area 62 and 64 (see Fig. 5A-5B and table 2).

In view of the above, the Examiner believes that the broadest interpretation of the present claimed invention does in fact read on the cited reference for at least the reasons discussed above and as stated in the detail Office Action as follows. This Office action is now made final.

Claim Rejections - 35 USC § 103

3. The text of those sections of Title 35, U.S. Code not included in this action can be found in a prior Office action.

4. Claims 1-10 and 13-14 are rejected under 35 U.S.C. 103(a) as being unpatentable over Park (US-5,477,271) in view of Takizawa (2005/0,030,415) and further in view of Omata (6,441,855).

Regarding **claim 1**, Park discloses an image sensing apparatus which comprises:

an image sensing device (an image sensor is inherently included in a video camera; col. 2, lines 50-54) which generates an image sensing signal by photo electrically converting light from an object (col. 3, lines 1-12);

a weighting device (44, Fig. 4) which weights a signal component corresponding to inside of a focus detection area in a frame (detection areas 62 and 64, Fig. 5A) sensed by said image sensing device (col. 5, line 56 – col. 6, Ln. 40);

an evaluation value acquiring device (Fig. 4; accumulator 46, error detection 48) which acquires a piece or pieces of information required to control a focusing lens only from an output from said weighting device (Fig. 4; weighting device 44; col. 5, lines 30-33; col. 6, lines 41-58);

wherein said weighting device changes a level of weighting in a second area (62) which is inside of the focus detection area (64) and outside of a first area (62) which is placed substantially at a center of inside of the focus detection area (Fig. 5A-B; Col. 5, Ln. 1-4; Col. 5; Ln. 55-63; Col. 6, Ln. 1-40; central area 62 of the Figs. 5A-B is set to a higher weighting value and placed at the center region; the focus detection area is broadly interpreted as the outer frame in figures 5A and 5B. The second area is interpreted as the area inside of the outer frame).

Park teaches the level of the weighting in the second area (Fig. 5A-5B; level of weighting in second area {64} is 0 or 0.5) is approached to a weighting level of the first area (Fig. 5A-5B; level of weighting in the first area {62} is 1). Park further teaches the plural of weighting step (see table 2 wherein the weighting value are varied from 2, 1, 1/2 and 0).

However, Park fails to explicitly disclose wherein the level of the weighting in the second area is changed so as to gradually approach to a weighting level of the first area through a plural steps.

In the same field of endeavor, Takizawa teaches a weighting device wherein the weighting values in the peripheral portion (Fig. 5; weighting value increases from 1 to 3) are gradually approaches the weighting values of the central portion (Fig. 5; weighting value of 4) in a plurality of steps (see Fig. 5 which comprises step 1 to 4). Takizawa further teaches that the main subject photographed is likely to be near the center of a screen and therefore, by more heavily weighting the vicinity of the center of the screen, accuracy of exposure can be improved

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([0035]). In light of the teaching from Takizawa, it would have been obvious to one of ordinary skill in the art at the time the invention was made to modify the device of Park to include the weighting device of Takizawa in order to heavily weight the vicinity of the center of the screen thereby improving the accuracy of exposure (Takizawa: [0035]).

However, Park and Takizawa fail to disclose wherein the focus detection area is one part of an image sensed by said image sensing device.

In the same field of endeavor, Omata teaches a focusing device wherein the focus area is located at a center portion of an image screen (Fig. 5; focus area FA; Col. 5, Ln. 39-42). Omata further teaches that the focus area can be divided into 9 tiles or any number of tiles (Col. 5, Ln. 43-52; Col. 9, Ln 19-28). In light of the teaching from Omata, it would have been obvious to one of ordinary skill in the art at the time the invention was made to modify the focus detection area of Park ^{and Takizawa} as one of a center portion of an image screen as taught by Omata in order to minimize the weighting computation and thereby increasing the focusing speed.

Regarding **claim 2**, Park in view of Takizawa and further in view of Omata discloses the apparatus wherein said weighting device (Park: 44) changes in the level of weighting so that the level of the weighting increases from a peripheral portion (Park: 64) to a central portion of the focus detection area (Park: col. 6, lines 1-40; the weighting value in the central portion 62 of Figs. 5A-5B is set at a greater value than the peripheral portion 64; weighting value in the sub-area are set randomly and varied in according to the Shift-Left/ Right -Shift control signal of tables 1-2; Takizawa: Fig. 5A-B; Col. 5, Ln. 1-4; Col. 5; Ln. 55-63; Col. 6, Ln. 1-40; central area 62 of the Figs. 5A-B is set to a higher weighting value).

Regarding **claim 3**, Park in view of Takizawa and further in view of Omata discloses the apparatus wherein said weighting device independently sets the level of weighting in horizontal and vertical directions of the frame (Park: Col. 5, Ln. 1-4; Col. 6, Ln. 1-40; the weighting value 1, 0.5 and 0 of in Figs. 5A-5B are set randomly in horizontal and vertical directions corresponding to the Shift-Left/ Shift- Right control signal of tables 1-2).

Regarding **claim 4**, Park in view of Takizawa and further in view of Omata discloses the apparatus wherein the focus detection area comprises a plurality of focus detection areas (Park: col. 4, lines 66-67; col. 5, lines 1-5), and said weighting device (Park: 44) performs relative weighting between the adjacent focus detection areas (Park: col. 5, lines 55-64; col. 6, lines 1-40; Figs. 5A-5B; Takizawa: Fig. 5A-B; Col. 5, Ln. 1-4; Col. 5; Ln. 55-63; Col. 6, Ln. 1-40; weighting is performed between area 62 and area 64).

Regarding **claims 5-8**, the claims are method-claims corresponding to the apparatus claims 1-4, respectively. Therefore, claims 5-8 are analyzed and rejected as previously discussed with respect to claims 1-4.

Regarding **claim 9**, Park in view of Takizawa and further in view of Omata discloses a program causing a computer to execute an auto focus method defined in claim 5 (Park: col. 7, lines 1-5).

Regarding **claim 10**, Park in view of Takizawa and further in view of Omata discloses a storage medium computer-readably storing a program defined in claim 9 (Park: col. 7, lines 1-5; it is inherent that a storage medium must be included for storing a controlled software).

Regarding **claim 13**, Park in view of Takizawa and further in view of Omata discloses the apparatus further comprising a driving device (Park: focus driver 50, Fig. 4) which drives a focusing lens to an in-focus point (Park: col. 6, line 58-62) on the basis of a signal acquired by said evaluation value acquiring device (Park: col. 6, lines 40-62).

Regarding **claims 14**, the claim is a method claim corresponding to the apparatus claim 13, respectively. Therefore, claim 14 is analyzed and rejected as previously discussed with respect to claims 14.

5. Claim 12 is rejected under 35 U.S.C. 103(a) as being unpatentable over Park in view Omata.

Regarding **claim 12**, Park discloses an image sensing apparatus, which comprises:
an image sensing device (an image sensor is inherently included in a video camera; col. 2, lines 50-54) which generates an image sensing signal by photo electrically converting light from an object (col. 5, lines 1-10);

weighting device (44, Fig. 4) which weights a signal component corresponding to inside of a focus detection area sensed by said image sensing device (detection areas 62 and 64, Fig. 5A), and

an evaluation value acquiring device (accumulator 46, error detection 48, Fig. 4) which acquires a piece or pieces of information (col. 5, lines 30-33; col. 6, lines 41-58) required to control a focusing lens from an output from said weighting device (Col. 5, Ln. 20-25; it is inherent that the focus driver 50 is used to control the focusing lens in according to the output of the weighting device 44).

However, Park fails to disclose wherein in the case that a plurality of focus detection area exist, a weighting value weighted by said weighting device is different from the case that only one focus detection area exist.

In the same field of endeavor, Omata teaches a focusing device wherein the focus area is located at a center portion of an image screen (Fig. 5; focus area FA; Col. 5, Ln. 39-42). Omata further teaches that the focus area can be divided into 9 tiles or any number of tiles (Col. 5, Ln. 43-52; Col. 9, Ln 19-28; it is inherent that a focus detection area with 9 tiles include 9 weighting coefficients while a focus detection area with only one tile includes one weighting coefficient). In light of the teaching from Omata, it would have been obvious to one of ordinary skill in the art at the time the invention was made to modify the focus detection area of Park as one of a center portion of an image screen as taught by Omata in order to minimize the weighting computation and thereby increasing the focusing speed.

Conclusion

6. Applicant's amendment necessitated the new ground(s) of rejection presented in this Office action. Accordingly, **THIS ACTION IS MADE FINAL**. See MPEP § 706.07(a). Applicant is reminded of the extension of time policy as set forth in 37 CFR 1.136(a).

A shortened statutory period for reply to this final action is set to expire THREE MONTHS from the mailing date of this action. In the event a first reply is filed within TWO MONTHS of the mailing date of this final action and the advisory action is not mailed until after the end of the THREE-MONTH shortened statutory period, then the shortened statutory period will expire on the date the advisory action is mailed, and any extension fee pursuant to 37 CFR 1.136(a) will be calculated from the mailing date of the advisory action. In no event, however, will the statutory period for reply expire later than SIX MONTHS from the date of this final action.

7. Any inquiry concerning this communication or earlier communications from the examiner should be directed to Hung H. Lam whose telephone number is 571-272-7367. The examiner can normally be reached on Monday - Friday 8AM - 5PM.

If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, NGOC YEN VU can be reached on 571-272-7320. The fax phone number for the organization where this application or proceeding is assigned is 571-273-8300.

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Information regarding the status of an application may be obtained from the Patent Application Information Retrieval (PAIR) system. Status information for published applications may be obtained from either Private PAIR or Public PAIR. Status information for unpublished applications is available through Private PAIR only. For more information about the PAIR system, see <http://pair-direct.uspto.gov>. Should you have questions on access to the Private PAIR system, contact the Electronic Business Center (EBC) at 866-217-9197 (toll-free).

HL
05/12/06



NGOC-YEN VU
SUPERVISORY PATENT EXAMINER